

REMARKS

This application is amended in a manner believed to place it in condition for allowance at the time of the next Official Action.

An Information Disclosure Statement is being filed with this amendment. However, the reference is not believed to be prior art as it is a non-English WIPO publication of an International Application published after the foreign priority document of the present application. The reference was cited from a foreign Patent Office in a counterpart foreign application.

Claims 1, 2, 15, and 24 are amended. Support for the amendment may be found, for example, in the complete paragraphs of page 4, the last complete paragraph of page 5, and the paragraph bridging pages 5 and 6 of the present specification.

Claims 7, 8 and 20 are cancelled without prejudice.

Claims 1-3, 5, 6 13-15, 17-19, and 21-24 are pending.

Claims 1, 2, 13-15 and 17-24 are rejected under 35 USC §103(a) as being unpatentable over RAJALINGAM et al. U.S. 6,271,305 (RAJALINGAM) in view of IWATA et al. U.S. 5,912,193. This rejection is respectfully traversed.

RAJALINGAM discloses fluid bituminous polyurethane compositions as coatings and sealing materials for roofs.

RAJALINGAM is offered for teaching a polyurethane polymer formed using a catalyst and a curing agent, isocyanate of

a functionality of 2 or more in some examples, and a polyol of a functionality equal to 2 in other examples. RAJALINGAM also is offered for teaching 40-60% rubberized asphalt and a bitumen to polyols/isocyanate ratio of 50:50.

However, RAJALINGAM has at most 60% bitumen (see column 7, lines 65-67), whereas the claimed invention, as defined in new claims 1, 15 and 24 is principally formed of bitumen 60 to 80%. Additionally, the ratio of isocyanate to polyol is between 1.0 and 1.1 in the claimed invention, e.g., independent claim 24, but RAJALINGAM is limited a ratio of isocyanate to polyol in the fluid mixture of 20:80 (see column 9, lines 27-30).

RAJALINGAM also fails to disclose features such as an elongation agent, polyurethane molecules free of double carbon-carbon bonds, polyols free of ethylene linkages, an isocyanate to polyol ratio as recited, modified bituminous binder is softened by reheating and recover its properties after subsequent cooling, and a prefabricated sealing membrane suitable for application by torch welding or hot air, as recited in the independent claims.

Indeed, the very manner of production, packaging and use of the RAJALINGAM composition appears to teach away from such features. Most significantly, the bituminous polyurethane fluid mixture is for application by spraying, not a prefabricated membrane for application by torch welding or hot air, which includes both a modified bituminous composition and a support.

IWATA is offered for teaching polyurethanes, and particularly, the recited polyol functionality, diisocyanate, and chain extender. The Official Action states that as IWATA discloses the same polyester polyols as the present invention, IWATA must also teach polyols that are free from ethylene bonds. The position of the Official Action is that IWATA provides motivation for selecting a polyurethane having the same characteristic as the claimed invention, e.g., to provide excellent heat resistance and cold resistance.

However, the proposed combination cannot render obvious the claimed invention for at least two reasons.

First, IWATA discloses molded articles of polyurethane. The essential objective of IWATA is to obtain polyurethanes purely for the production of molded articles such as fibers or stratified products with fibrous layers. desired heat/cold resistance is provided to another material by applying a laminate of the polyurethane. Thus, there is no indication or suggestion in IWATA that would lead a person of ordinary skill in the art to mix the polyurethanes with other materials to achieve the desired results, much less with a liquid bitumen mixture.

Second, IWATA does not teach the polyurethane characteristics as recited, contrary to the assertion in the Official Action. For example, polyester polyols are not

necessarily free from ethylene bonds as recited in claims 1, 15 and 24. Also, IWATA does not contain a positive teaching a diisocyanate and a polyol having both a functionality substantially equal to 2, i.e., as recited in claim 1, nor to select a diisocyanate and a polyol both having a functionality comprised between 1.95 and 2.05, i.e., as recited in claim 15.

Therefore, the proposed combination fails to render obvious independent claims 1, 15, and 24, and claims depending therefrom, and withdrawal of the rejection is respectfully requested.

In view of the amended claims and foregoing remarks, Applicants believe that the present application is in condition for allowance at the time of the next Official action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Robert Madsen Reg. No. 58,543
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

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